

# **System Guide**

Intergraph StudioZ for SOFTIMAGE®|DS



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Intergraph StudioZ for SOFTIMAGE®|DS

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Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

### **Notes**

Changes or modifications made to the system that are not approved by the party responsible for compliance could void the user's authority to operate the equipment.

Read all safety and operating instructions before using the equipment. Keep these instructions for future reference. Follow all warnings on the equipment or in the operating instructions.

### **Warnings**

To reduce the risk of electrical shock, do not attempt to open the equipment unless instructed. Do not use a tool for purposes other than instructed.



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## Site Preparation

Before you unpack your new system, make sure that you have properly completed preparing your site.

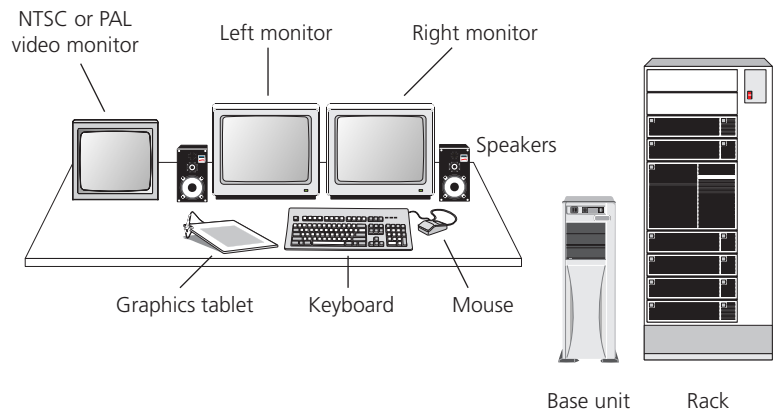
### Site Requirements

The Intergraph StudioZ for SOFTIMAGE|DS is designed to operate in a typical office environment. The following table describes suitable site conditions:

Temperature	Operating range: 50° to 80°F (10° to 26° C) Optimum operating temperature: 70°F (21°C)
Humidity	Operating range: 20% to 80% non-condensing Optimum humidity level: 50%
Power	Base unit and monitor: 100-240 VAC 50-60 Hz 10/5 Amp WACOM Tablet: 110 VAC - 60 Hz 50 milliamps

### Space Requirements

Depending on the configuration that you purchased, your system includes a deskside or a rackmount base unit. You can place this unit next to your work area or in a separate room using an Intergraph Cable Extension kit. The following illustrates a typical configuration:



*Video monitor, speakers, VCRs, rack and table are purchased separately.*

#### Note

The video monitor and the computer monitors should be placed at least 12 inches (30cm) apart. Placing them closer together may cause synchronization interference on the computer monitor.

The following table lists the dimensions of the major hardware components:

Hardware Component	Dimensions (inches)	Dimensions (cm)
Base Unit - Deskside	Height: 25.8 inches	66 cm
	Depth: 20 inches	51 cm
	Width: 7.9 inches	21 cm
Base Unit - Rackmount	Width: 16.7 inches	22 cm
	Height: 8.8 inches	42 cm
	Depth: 25.3 inches	64 cm
Monitor	Height: 19.5 inches	50 cm
	Width: 20 inches	51 cm
	Depth: 21 inches	53 cm
	Swivel Angle: 90° each left and right; 13° up; 4° down	Swivel Angle: 90° each left and right; 13° up; 4° down
WACOM tablet	Width: 12 inches	31 cm
	Depth: 12 inches	31 cm

### Choosing a Location for Your System

Consider the following items when choosing a location for your system:

- For the editing workstation, you need a table (or other surface) that is at least 60 inches wide by 48 inches deep (150 cm x 120 cm).
- The Intergraph StudioZ base unit comes with 6 feet of cable allowing you to place it close to your work area. If you want to place it in a separate room, you must use an Intergraph cable extension kit that contains keyboard, mouse, and monitor extension cables with an amplifier. To obtain a cable extension kit, contact your system reseller.
- The base unit must be in a location where air can circulate freely around it. The side and back panels of the deskside base unit should each have at least a 3-inch (7.6 cm) clearance. The front and back panels of the rackmount unit should each have a 36-inch (91.4 cm) clearance.
- External audio and video equipment can reside in the same room as your workstation or in a separate equipment room.
- Do not expose the system to high levels of dust, smoke, moisture, or high temperature.

## Package Contents

Your Intergraph StudioZ for SOFTIMAGE|DS system contains the following hardware, software, and documentation.

### Hardware

You should unpack the hardware carefully and verify that you have all the items that are listed on the packing slip before you start to set up your system. Make sure that you log the serial number of every device.

Your system contains the following hardware:

Device	Device, Cables, and Accessories
Intergraph StudioZ for SOFTIMAGE DS Base Unit	1 Base Unit
	1 S-video cable (3-foot)
	1 Flashkey cable (6-inch DB-9 to mini DIN-8)
	1 Pipeline cable for machine control (special RS-422)
	1 Analog I/O breakout cable with 8 XLR connectors for the Antex audio card
	1 Digital I/O breakout cable for the Antex audio card
	2 Base unit supports (for deskside base unit only)
	1 Intergraph keyboard
	1 Microsoft IntelliMouse
	1 3-button mouse
Intergraph Multisync 21-inch Monitors	1 Power cable
	2 Monitors
	2 SVGA monitor cables
WACOM ArtZII Pen and Tablet	2 Power cables
	1 Tablet
	2 Tablet stands
	1 Pen
	1 Pen stand
	1 RS-232 cable
	1 Power transformer cable with AC adapter
1 Registration card	
1 9-pin to 25-pin adapter	

### Software and Documentation

All the software that you receive on disks is also installed on your computer's hard drive. You should keep the software disks in a safe place in case you need to reinstall the software.

Your package contains the following:

- The SOFTIMAGE|DS software CD, the software protection key (dongle), and the complete SOFTIMAGE|DS documentation set which includes the following information in print and/or online:

Document	Description
Release Notes	Describes known problems, and provides workarounds and supplemental information.
System Guide	Shows you how to setup your system hardware and perform system administration tasks.
Guided Tour	Provides a multimedia overview of the SOFTIMAGE DS working environment.
Tutorial Workbook	Contains lessons with specific step-by-step examples.
User's Guide	Describes the interface and details tasks that are specific to each area of SOFTIMAGE DS.
Quick Reference	Contains a visual overview of the SOFTIMAGE DS layouts and tool panels, editing tips, and the complete list of default keyboard shortcuts.
Shortcuts	Contains a selection of keyboard shortcuts for placing under the top sheet of your graphic tablet.
Online Help	Contains reference information on the parameters contained in property editors and dialog boxes, interface elements, and tasks.

- Windows NT<sup>®</sup> 4.0 Workstation and Windows NT 4.0 Service Pack 3 software and documentation.
- ArtZII software and documentation by WACOM.
- Evolution Series Colorgraphic software and documentation.
- MKS Backup Utilities for Windows NT software and documentation.
- Intergraph DiskAccess software and documentation.
- Integral Flashkey software and documentation.
- Antex Studiocard AV PRO software and documentation.
- StudioZ Central Plus software and documentation.
- StudioZ SDI Board software.

## Reference Documentation

In addition to the software documentation previously listed, the package contains hardware manuals and other reference material:

- *Running Microsoft Windows NT Workstation Version 4.0* by Craig Stinson and Carl Siechert (Microsoft Press, Redmond, WA).
- *Digital Multi-Scan Color Display Operating Instructions*.
- *WACOM artZII User's Manual*.
- *Intergraph StudioZ System Setup*.
- *StudioZ Late-Breaking News*.

## Additional Peripherals and Cables

A typical workstation requires that you provide the following additional peripherals:

Device	Description
House Sync	The house sync must have the same video format (NTSC or PAL) as your video equipment and as the project that you create in SOFTIMAGE DS.
Video Monitor	NTSC or PAL Digital or Analog.
Video Cassette Recorder (VCR)	Analog or digital VCRs connect to the base unit through a RS-422 cable.  Analog devices require A/D converters which are available from your system reseller.
A/D Converter	An A/D converter is required when using an analog VCR.
Waveform Monitor	This device is used for luminance video signal control.
Vector Scope	This device is used for chrominance video signal control.
Speakers and Amplifier	Analog and/or digital audio equipment connects to XLR connectors.
Cables	Video: Use high quality 75-ohm coaxial cables with 75-ohm BNC coaxial connectors.  Audio: Use analog XLR connectors and digital XLR connectors.
Intergraph Cable Extension Kit	This kit contains keyboard, mouse and monitor extension cables with an amplifier. It is required if you place the base unit more than 6 feet from the monitor, keyboard, mouse, and WACOM tablet.  The use of any other extension cables may cause signal degradation.

For more information on optional equipment, contact your system reseller.

## Inputs and Outputs

The following table describes the system inputs and outputs:

Input/Output	Description
Video In	Serial Digital In (SDI) via BNC connector.
Video Out	SDI out via BNC connector. Composite out via BNC connector. Y/C via 4-pin mini DIN (this port is used for the software video interface).
Analog Audio In	4 female XLR connectors. Line input 600 ohms.
Analog Audio Out	4 male XLR connectors. Line output 600 ohms.
Digital Audio In	Female XLR connector; AES/EBU or S/PDIF.
Digital Audio Out	Male XLR connector; AES/EBU or S/PDIF.
Sync In	BNC connector.
RS-232 Remote	DB-9 connector. Connects to the Pipeline cable for converting RS-232 to RS-422. Use only the supplied cable.

To take full advantage of the high quality serial digital interface (SDI) capability of your workstation, you should connect the digital devices directly to the SDI ports on the Intergraph StudioZ card and to the AES/EBU - S/PDIF output from the Antex card.

Avoid using adapters because they may cause signal degradation. If you must use them, use only high-quality, tight-fitting adapters.

For detailed instructions on connecting your system, see *Connecting the Hardware* on page 7.

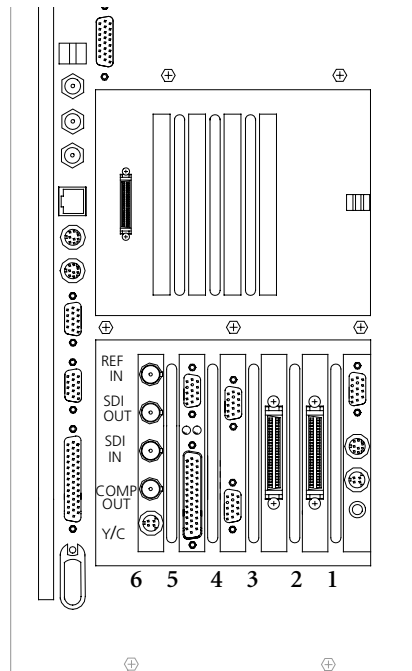
## Connecting the Hardware

This section provides step-by-step instructions for connecting a the base unit to the peripheral devices in a standard configuration. It covers both analog and digital setups. A complete cabling diagram is also included in the Appendix on page 45.

The cards are installed and configured for the SOFTIMAGE|DS environment. You should not remove or modify these cards.

### Back Panel Overview

On the back panel of your base unit, six cards are installed and configured for the SOFTIMAGE|DS environment.



*Deskside Base Unit*

Slot	Function	Card
1	Video in a Window	Integral Flashkey
2	Array Controller	Adaptec 1
3	Array Controller	Adaptec 2
4	Graphic Output	Colorgraphic Evolution 2
5	Audio I/O	Antex StudioCard
6	SDI Video I/O	Intergraph StudioZ

**Note**

In the rackmount base unit, the slot allocation is identical but the unit is horizontal.

### **Video in a Window Card**

The Video in a Window card is the Flashkey by Integral Technologies. It lets you display real-time video in the SOFTIMAGE|DS viewer on your computer monitor.

### **Array Controllers**

The array controllers are two Adaptec 2940 SCSI controllers. Each one controls data I/O for two of the four Ultra Wide SCSI video storage disks.

### **Graphics Card**

The graphics card is an Evolution 2 graphics adapter from Colorgraphic Communications. It controls the dual-screen VGA output to your computer monitor.

### **Audio Card**

The audio card is an Antex Studiocard. It receives and transmits audio signals. The Antex Studiocard supports four independent balanced analog I/O (+4 dBu) and AES/EBU or S/PDIF digital I/O.

### **Serial Digital Interface (SDI) Card**

The SDI card is the Intergraph StudioZ card that handles video input and output of both compressed and uncompressed Serial Digital Video data. The Intergraph StudioZ combines Joint Photographic Experts Group (JPEG) Compression/Decompression circuitry with SDI on a single PCI board.

For more details on the cards, refer to the accompanying vendor documentation.



To prevent damage that may be caused by static electricity, do the following before making any connections:

- Turn the power switch off on all the devices.
- Connect all the devices to a power source.
- Touch the metal casing of the device.

## **Connecting to a Power Source**

The Intergraph base unit and monitor support both 110V/60 Hz and 220V/50 Hz power. The WACOM tablet comes with a single voltage AC power adapter. If it does not match your AC power source, contact your system reseller.

The base unit, monitors, and WACOM tablet each require a separate AC power source. To supply your SOFTIMAGE|DS workstation as well as



## Connecting the Keyboard, Mouse and WACOM tablet

additional peripheral devices, you must have access to four AC outlets with two 15 Amp circuits (or 7.5 Amp in Europe).

### *To connect the workstation to a power source*

1. For every device, make sure that the voltage of the power source matches the voltage requirements of the device.
2. Make sure that power to all the devices is turned off.
3. Connect the base unit, the monitor(s), the WACOM tablet, and any other peripheral devices to a power source.

The keyboard and the mouse come with attached cables for connecting them to the back panel. The WACOM tablet comes with a power transformer and a DB-9 cable.

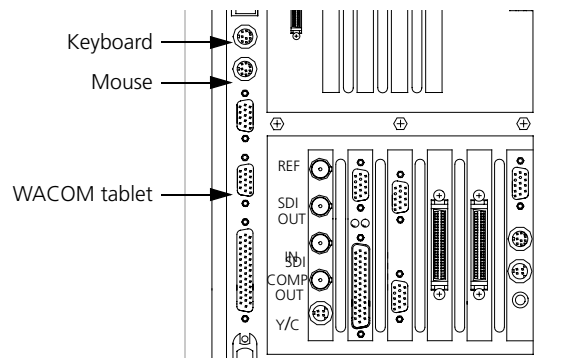
### *To connect the keyboard and the mouse*

1. Connect the keyboard to the top mini-DIN jack in the deskside base unit. If you have a rackmount base-unit, connect the keyboard to the left-hand mini-DIN jack.
2. Connect the Microsoft IntelliMouse to the bottom mini-DIN jack in the deskside base unit. If you have a rackmount base-unit, connect the mouse to the right-hand mini-DIN jack.

### *To connect the WACOM tablet*

1. Connect the AC power transformer to the tablet DB-9 cable.
2. Connect one end of the DB-9 cable to the COM 2 port on the back panel and connect the other end to the tablet.
3. Before plugging in the AC power transformer, check that the input voltage on the power adapter matches the voltage of your power outlet.
4. Connect the power adapter to the AC outlet.

For more information on connecting the WACOM tablet, refer to the accompanying vendor documentation.



## Connecting the Computer Monitors

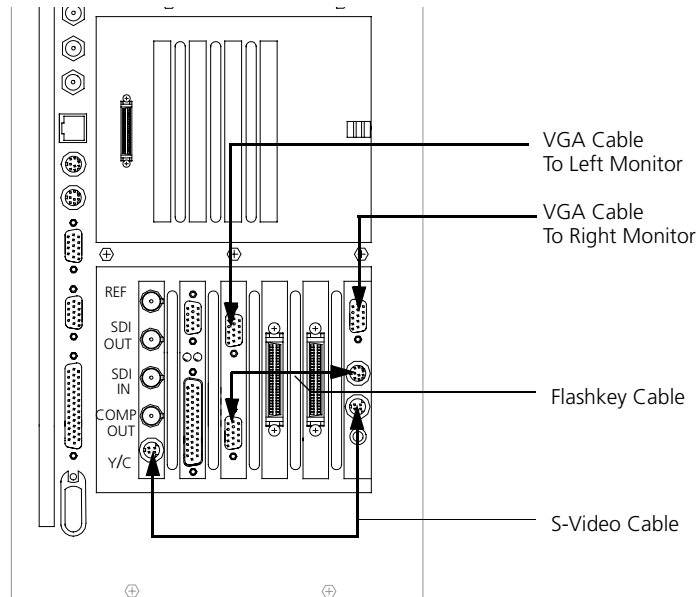
Your workstation comes with two identical Intergraph monitors for displaying the SOFTIMAGE|DS editing environment. You should place the monitors side by side in your work area.

Each monitor comes with the following cables:

- VGA cable
- Power cable

### To connect the monitors

1. If you have not already done so, turn off the power switch to the monitors and the base unit and connect them to a power source.
2. Connect the monitor which is on the right side to the Video in a Window card using the VGA cable supplied.
3. Connect the monitor which is on the left side to the top port on the graphic card using the VGA cable supplied.
4. Connect one end of the Flashkey cable to the second port from the top of the Video in a Window card and connect the other end to the lower port of the graphic card.
5. Connect one end of the S-Video cable to the Y/C port of the Intergraph StudioZ card and connect the other end to port that is second from the bottom on the Video in a Window card.



## Connecting Peripheral Devices

Peripheral devices such as VCRs and DATs connected to your workstation allow you to capture and output video and audio material. You can control this equipment remotely with SOFTIMAGE|DS.

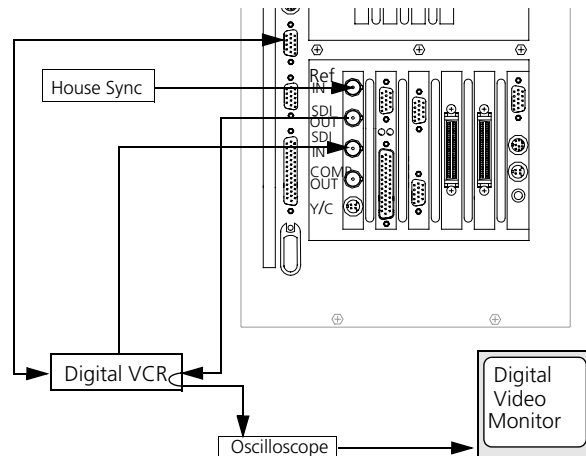
### Video Connections

Your system can contain digital and/or analog VCRs and video monitors. If you use an analog video monitor, it is connected directly to the Intergraph StudioZ card, and the composite video signal that it receives is of a lower quality.

**Note** When connecting the devices, make sure that all video outputs are terminated by the video device to which they are connected. Also ensure that no device is connected to a power source.

#### To connect a system with digital devices

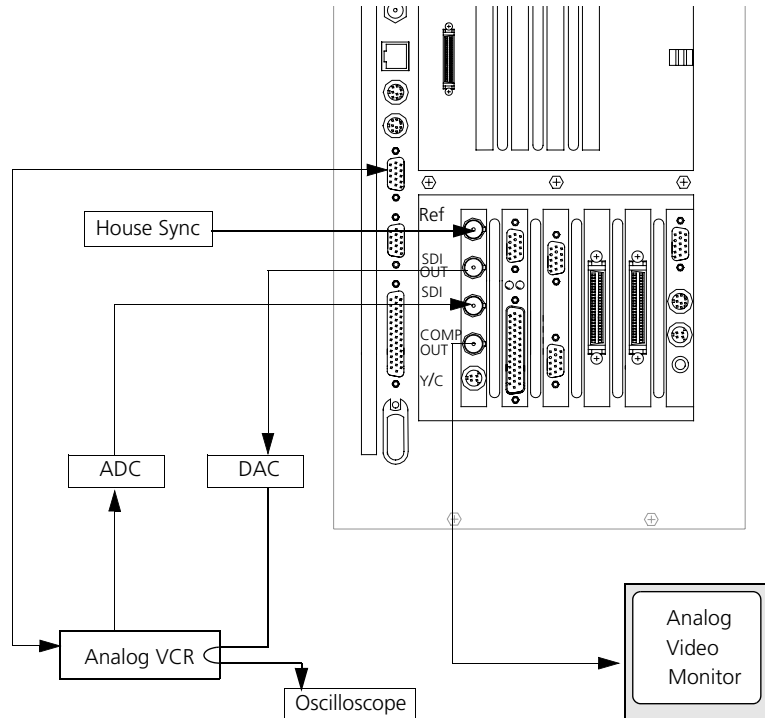
1. Connect the **SDI In** on the Intergraph StudioZ card to the **SDI Out** on the VCR.
2. Connect **SDI Out** on the Intergraph StudioZ card to the **SDI In** of the VCR.
3. Connect the **SDI loop through** on the video monitor to **SDI In** on the VCR.
4. Set the VCR transport switch to **Remote**.
5. Connect the **COM 1** port on your base unit to the **REMOTE IN** port on the VCR using the pipeline cable supplied. You should not substitute the pipeline cable with any other cable, but you can extend the RS422 end with other cables if required.
6. Connect the **Ref In** port on the Intergraph StudioZ card to the **House Sync Ref Out**.



Video connections for digital peripheral devices

*To connect a system with analog devices*

1. Connect the **SDI In** on the Intergraph StudioZ card to the **Video Out** on the analog VCR via a **A/D converter**.
2. Connect **SDI Out** on the Intergraph StudioZ card to the **Video In** on the analog VCR via a **D/A converter**.
3. Connect **Comp Out** port on the Intergraph StudioZ card to the **Video in** on the analog video monitor.
4. Set the VCR transport switch to **Remote**.
5. Connect the **COM 1** port on your base unit to the **REMOTE IN** port on the VCR using the pipeline cable supplied. You should not substitute the pipeline cable with any other cable but, you can extend the RS422 end with other cables if required.
6. Connect the **Ref In** on the Intergraph StudioZ card to the **House Sync**.



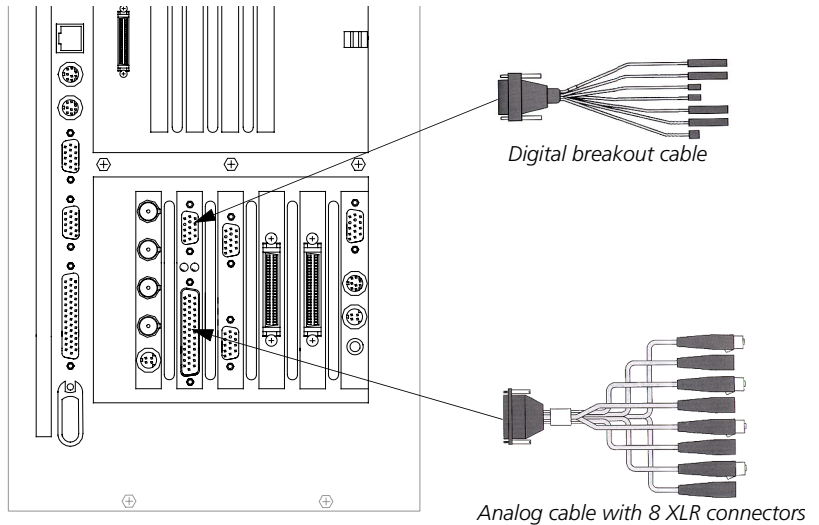
*Video connections for analog peripheral devices*

## Audio Connections

You can connect both digital and analog audio devices to your system's Antex StudioCard AV PRO. When you capture audio, SOFTIMAGE|DS enables the input that you specify.

### To connect audio cables

1. Attach the Antex digital I/O cable to the upper (DB-15) port on the audio card and tighten the locking screws.
2. Attach the Antex analog I/O cable to the lower (DB-25) port on the audio card and tighten the locking screws.
3. Referring to the white tags on the Antex cables, connect your external audio equipment to the appropriate analog and digital connectors.

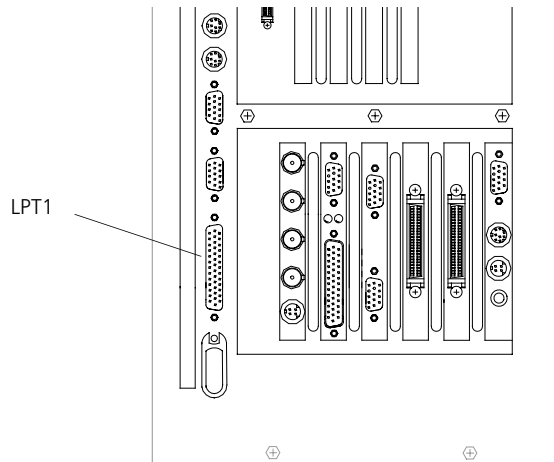


## Attaching the Software Protection Key

The software protection key, also called a dongle, provides copy protection for the software that is installed on your system. It is attached to your system's parallel port. SOFTIMAGE|DS can start only if the software protection key identification number matches the information in the license file that is already installed on your computer's hard drive.

This licensing scheme is managed by the FLEXlm<sup>®</sup> software which is already installed on your system. For more information on the license software, refer to *Installing the License File* on page 36 and refer to the FLEXlm online help.

- To attach the software protection key, attach it to the base unit's parallel port (LPT1)



## Moving the System

It is important to follow the correct procedure when moving the system to a different location.



Do not move the base unit without first turning off the power or else internal components may be damaged.

### To move the system

1. Shut down your computer.
2. Turn off power to all the devices.
3. Disconnect all the devices.
4. Disconnect the power cables.
5. Move the components carefully.
6. Make sure the new location meets site requirements (see *Site Requirements* on page 1).
7. Reconnect the equipment as described in this chapter (see *Connecting the Hardware* on page 7).

## Starting SOFTIMAGE|DS

SOFTIMAGE|DS has already been installed on your computer's hard drive. To start it, follow these steps:

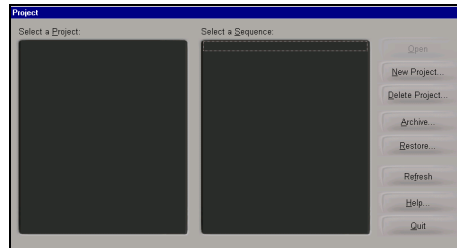
### To start SOFTIMAGE|DS

1. Turn on all the devices.
2. Log on to Windows NT.

When you log on for the first time, you can use a blank password. For information on changing your password, refer to *Managing User Accounts* on page 22.

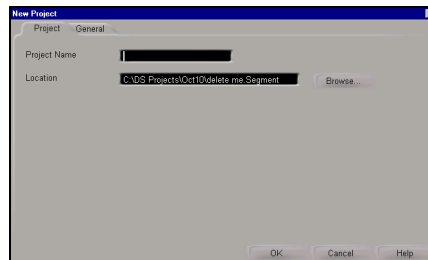
3. Click the **Start > Programs > SOFTIMAGE|DS > SOFTIMAGE|DS**.

The Project dialog box is displayed.



4. Click **New Project**.

The New Project dialog box is displayed.



5. In the **Project Name** box, enter a name for your new project.

The SOFTIMAGE|DS Editing Layout is displayed by default.

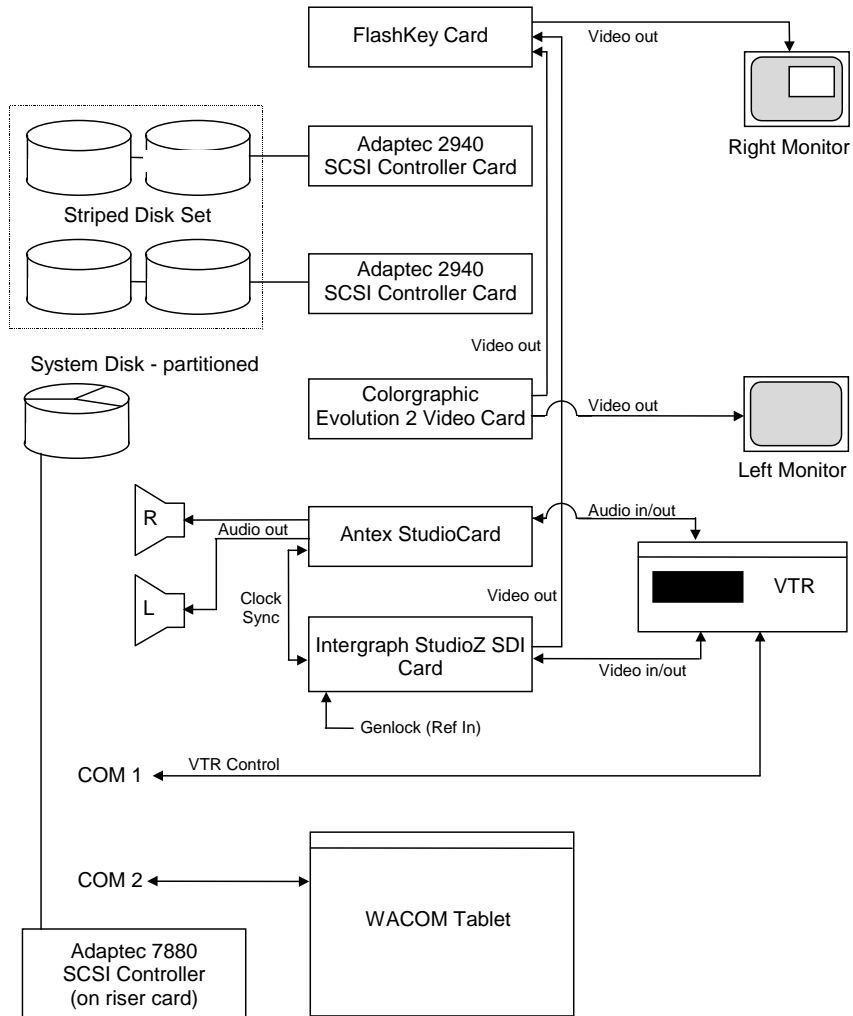
You can now capture material and build your project. To find out the best approach to learning SOFTIMAGE|DS, refer to the *SOFTIMAGE|DS Road Map*.

**Tip** You should create separate Windows NT user accounts so that each SOFTIMAGE|DS user can save their own project preferences. See *Managing User Accounts* on page 22.

## System Hardware Overview

### Intergraph StudioZ for SOFTIMAGE|DS

Your Intergraph StudioZ workstation provides a comprehensive set of optimized hardware features that allow you to achieve high-quality results with the SOFTIMAGE|DS software. This section provides an overview of the hardware. For details, see the vendor documentation accompanying each device. See *Connecting the Hardware* on page 7 for details on cable connections.



*Hardware components of the Intergraph StudioZ and associated peripheral devices*



## Intergraph StudioZ SDI and Associated cards

The following table describes the function of each card installed in the Intergraph StudioZ. Cards are installed in all Peripheral Component Interconnect (PCI) slots. Slots 5 and 6 are primary PCI sockets (PCI0). The rest of the slots are secondary PCI (PCI1). See the vendor documentation for details on card specifications and configuration.

Slot	Card	Function
1	Video in a Window card	Processes input from Intergraph StudioZ and Colorgraphic card and outputs video signal to right monitor with Video in a Window.
2	Adaptec 2940 SCSI Controller	Controls data I/O for two of four Ultra Wide SCSI video storage disks.
3	Adaptec 2940 SCSI Controller	Controls data I/O for two of four Ultra Wide SCSI video storage disks.
4	Colorgraphic Evolution 2	Dual monitor graphics card outputs video data to Video in a Window card and to left monitor.
5	Antex Audio StudioCard	Processes audio and clock sync signal I/O for VCR (Video Cassette Recorder) and ports audio to optional devices, such as stereo speakers.
6	Intergraph StudioZ SDI	Processes video capture/playback I/O for VCR and ports video to FlashKey card; also provides Genlock capability (Ref In).

## Signal Flow

The following provides an overview of the signal flow in the system's two modes. The SOFTIMAGE|DS software controls the process and specifies the type of video compression used.

### Capture

Capture mode allows you to use SOFTIMAGE|DS to capture or play back video and audio from the VCR.

- The video output of the VCR goes to the Intergraph StudioZ card.
- The audio output of the VCR goes to the Antex card and then to the audio storage on disk.
- The clock sync signal from the Intergraph StudioZ card goes to the Antex card.
- The video output from the Intergraph StudioZ card goes to the video storage on disk.
- The S-video output of the Intergraph StudioZ card goes to the FlashKey card and then to the right monitor, where it displays as video in a window.
- The control signal from the COM 1 port goes to the VCR to control device operation.
- The sync signal from the house sync goes to the Intergraph StudioZ card.

### Record

Record mode allows you to use SOFTIMAGE|DS to record video on the VCR.

- The video stored on disk goes to the Intergraph StudioZ card, and then goes to the VCR.
- The audio stored on disk goes to the Antex card, and then goes to the VCR.
- The clock sync signal goes from the Intergraph StudioZ card to the Antex card.
- The S-video output of the Studio Z card goes to the FlashKey card and then to the right monitor, where it displays as video in a window.
- The control signal from the COM 1 port goes to the VCR to control device operation.
- The sync signal from the house sync goes to the Intergraph StudioZ card.

## SCSI Disk Subsystem

In a standard configuration, one 9-GB 7,200-RPM Ultra-Wide SCSI disk drive and four identical 9-GB 10,000-RPM Ultra-Wide SCSI disk drives are installed in the external and internal drive bays of the Intergraph StudioZ. No bays are available to install additional drives. The 9-GB 7,200-RPM system disk drive is formatted with three partitions for storage of operating system files, project files, and audio files. Four 9-GB 10,000-RPM disk drives are formatted as a striped set for video file storage.

Disk striping is a hardware capability that speeds up data I/O from disk storage. The computer divides the data into pieces and spreads the pieces across the disks in the striped set. Because the computer transfers data to multiple drives in chunks smaller than it would transfer to a single drive, data transfer is accelerated.

Each of the Adaptec 2940 SCSI Controller cards handle data I/O for two video storage drives. The Adaptec 7880 SCSI Controller, located inside the Intergraph StudioZ, handles data I/O for the system disk drive. The Adaptec controllers provide a maximum theoretical sustained data transfer rate of 40 MB per second. With disk striping, this rate is increased to about 50 MB per second.

The following table summarizes disk drive information. Note that the CD-ROM is assigned drive letter G.

Drive	Label	Size	Function	Format
C:\	System	2 GB partition	Stores operating system software	File Allocation Table (FAT)
E:\	Audio Storage	4 GB partition of C:\	Stores audio files	NT File System (NTFS)
F:\	Projects	3 GB partition of C:\	Stores project-related files	NTFS
D:\	Video Storage	4 each 9 GB (striped)	Stores video files	NTFS

## System Specifications

For details on the Intergraph StudioZ hardware configuration, see Intergraph's online *System Reference* document provided on disk in the WIN32APP\SYSREF directory.

## System Administration

To perform system administration tasks, you need to be familiar with the directories and files installed on your system. You should also have sufficient working knowledge of Windows NT to manage user accounts and perform disk performance tests.

Managing projects and project media is performed in SOFTIMAGE|DS. For more information on these tasks, refer to *the SOFTIMAGE|DS User's Guide*.

### Directories Installed on Your System

When you install SOFTIMAGE|DS, five directories are created to hold various system files, project files, as well as media and cache files.

These are the directories that are created:

Directory	Description
SOFTIMAGE DS	Contains the files required to run SOFTIMAGE DS.
DS Projects	Contains the projects, sequences, and clips that you create in SOFTIMAGE DS.
DS Presets	Contains customized effects that you can use in SOFTIMAGE DS when creating graphics, transitions, compositing, etc.
Video Storage	Contains the video media and cache files that you capture and bring into SOFTIMAGE DS.
Audio Storage	Contains the audio media and cache files that you capture and bring into SOFTIMAGE DS.

### The SOFTIMAGE|DS Directory

This directory contains the SOFTIMAGE|DS executable as well as the various .dll files required by the software. You should not move or modify these files in any way. The SOFTIMAGE|DS directory also contains the following folders:

- **Guided Tour**  
This folder contains all the files required to run SOFTIMAGE|DS Guided Tour which is a multimedia presentation that helps you become familiar with SOFTIMAGE|DS.
- **Online Help**  
This folder contains all the files required to use the online help. Online help provides reference information on property editors, dialog boxes, parameters, interface elements, and tasks.
- **Papers**  
This folder contains bitmaps that you can use to add texture to paint strokes, shapes, and titles that you create in SOFTIMAGE|DS.
- **Setup**  
This folder contains all the files required by the setup program which allows you to remove SOFTIMAGE|DS or to add optional software components.

## The DS Projects Directory

The DS Projects directory contains the projects that you create with SOFTIMAGE|DS. Each time you create a new project, you are prompted to select a location for the project folder. Although you may store project folders anywhere on a local disk, it is easier to manage projects if they are all stored in the DS Projects directory.

The project folder contains the clips and sequences associated with a project. Each project folder also contains a system folder.



You should not move, delete, or modify the contents of the system folder. The system folder should also be hidden. To hide specific file types, choose Options from the View menu in Windows Explorer.

The system folder contains the following information:

- Source models

Source models are data structures that allow SOFTIMAGE|DS to manage the relationship between clips, sequences and their associated media. Each time you capture media from a new source, SOFTIMAGE|DS creates a corresponding source model. The source model tracks the timespan, quality, and location of the different media files captured from that source. When you play back a clip from that source, SOFTIMAGE|DS consults the appropriate source model to locate the media.

- dsprojectinfo

The dsprojectinfo file contains information about the project format and other project preference settings. For more information on project preferences, refer to the *SOFTIMAGE|DS User's Guide*.

## The Presets Directory

The Preset directory contains presets which you can use to define effects, transitions, graphics tools, etc. When you create your own presets in SOFTIMAGE|DS and they are stored in this directory.

## The Video Storage Directory

The Video Storage directory contains individual folders for each project. Each folder contains the video media and cache files for that project. Each folder's name is generated by the software and is based on a unique identification string (called a GUID) that identifies each project.

## The Audio Storage Directory

Similar to the Video Storage Directory, the Audio Storage directory contains individual folders for each project. Each folder contains the audio media files for that project.



You should not delete audio or video media files or folders from your Windows NT desktop. If you want to delete a media file, use the purge command in SOFTIMAGE|DS. For information on deleting clips and/or purging media, refer to the *SOFTIMAGE|DS User's Guide*.

## **Managing User Accounts**

SOFTIMAGE|DS makes full use of the Windows NT operating system. This includes multiple user accounts with security and preferences set on an individual basis.

### **How SOFTIMAGE|DS Uses User Accounts**

When you log on to a Windows NT workstation, you are accessing an environment associated with your user name. When you set any personal or project preferences while logged on, SOFTIMAGE|DS saves them to your user profile. For example, when you customize the SOFTIMAGE|DS desktop the layouts that you create are saved with your user name. The next time you log on to that machine, it recalls your previous settings.

### **Managing User Accounts**

When you first receive your SOFTIMAGE|DS system, Windows NT is installed and an administrator account is set up with a blank password.

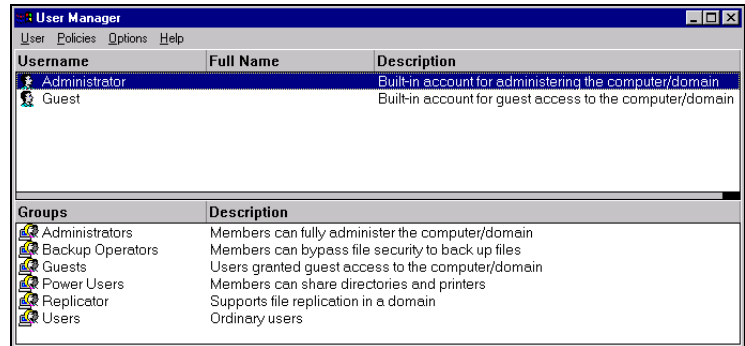
You can change your password, create and modify accounts by accessing the Windows NT User Manager. The User Manager lets you define security features such as permissions, rights, accounts, user groups, and audit policies.

For more information on Managing User accounts, refer to *Running Microsoft Windows NT Workstation Version 4.0* which is include in your system package.

### To create a user account

1. From the Windows NT desktop, choose **Start > Programs > Administrative Tools > User Manager**.

The User Manager dialog box is displayed.



2. Choose **User > New User** and enter the new user information in the dialog box.

After you click OK, the new user is displayed in the User Manager dialog box.

### To modify an account

1. From the Windows NT desktop, select **Start > Programs > Administrative Tools > User Manager**.

The User Manager dialog box is displayed.

2. Select the user name that you want to modify, or select Administrator to modify the administrator's account.
3. Choose **User > Properties**, and enter a new password.

*Tip* You can also press CTRL+ALT+DEL and select Change Password.

4. Choose **Policies > Accounts** and select the desired options.
5. Choose **Policies > Audit** and set the audit policy for the selected account.
6. Choose **Options** and select the options from the menu.

### To delete an account

1. In the User Manager dialog box, select an account.
2. Choose **User > Delete**.

After you confirm, the selected account is deleted.

## Rebuilding the System

When you first receive your Intergraph StudioZ for SOFTIMAGE|DS, all the software you need to run SOFTIMAGE|DS is already installed and tested. You should not remove or modify the installed software.

Your system is finely tuned and the approved configuration must be maintained. This section is included in case you need to reinstall or reconfigure certain components, or re-install SOFTIMAGE|DS.

For details on the hardware drivers, refer to the accompanying vendor documentation.

### Installing the Graphics Card Driver

Your system's graphics card is an Evolution 2 Colorgraphics adapter from Colorgraphic Communications. This card requires that you install and configure the Evolution 2 driver for Windows NT.

#### *To install the graphics card driver*

1. In the Windows NT Control Panel, double-click the **Display** icon.
2. In the Display Properties dialog box, select the **Settings** tab.
3. In the Settings page that is displayed, click the **Display Type** button.
4. In the Display Type dialog box that is displayed, click the **Change** button.
5. In the Change Display dialog box, click the **Have Disk** button.  
The Install From Disk dialog box is displayed.
6. Insert the disk containing the Colorgraphic Evolution 2 driver into your computer's disk drive.
7. In the Install From Disk dialog box, click the **Browse** button and open the folder that contains the Colorgraphic Evolution 2 driver for Windows NT.
8. Select the file with an **.inf** file extension and click the **Open** button.
9. In the Install From Disk dialog box, click **OK**.  
The Change Display dialog box is displayed again.
10. In the Change Display dialog box, click **OK**.  
A Third-party Drivers warning message is displayed.
11. Click **YES**.  
The driver is installed. The Installing Driver warning message is displayed, indicating that the system will restart.
12. Click **OK**.

When the system restarts, the Display Properties dialog box is displayed, as well as the following warning :

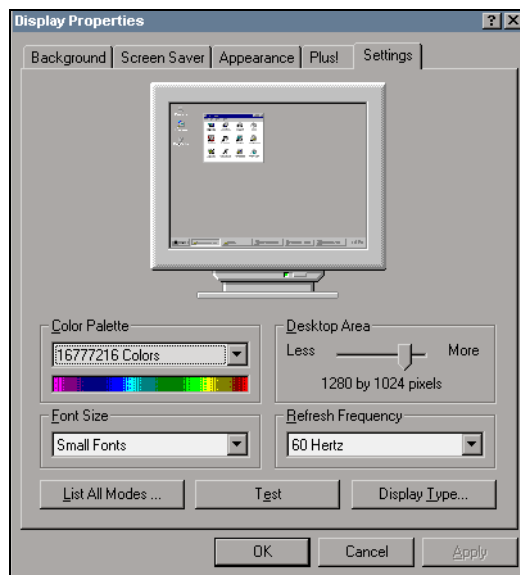




13. Click OK, and adjust the settings in the Display Properties dialog box as described in the following task.

#### *To adjust the display settings*

1. After you complete the Colorgraphic Evolution 2 driver installation, the system restarts and the Display Properties dialog box is displayed.
2. In the Display Properties dialog box, select the **Settings** tab. The Settings page is displayed.



3. Adjust the following settings:
  - From the Color Palette list box, select **16777216 Colors**.
  - Adjust the Desktop Area slider to **1280 by 1024 pixels**.
  - From the Font Size list box, select **Small Fonts**.
  - From the Refresh Frequency list box, select **60 Hertz**.
4. Click the **Test** button.  
You are prompted to confirm, and the test is started.

5. When the test is complete, click **Yes**. If you did not see the test bitmap properly, verify the settings and repeat the test. If the problem persists, contact your system reseller.
6. Click **OK** to close the Display Settings dialog box.  
The display is configured.

## Installing the Audio Driver

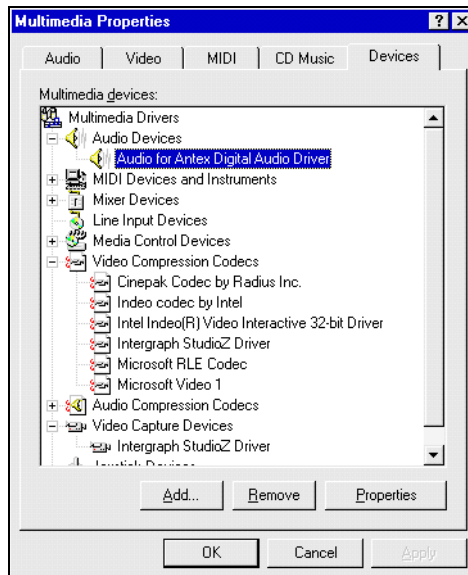
Before installing the Antex driver, you must remove any previous versions. Once the driver is installed, you must set the Windows NT multimedia properties, and set the Antex mixer. It is very important that you set the sample clock in the Antex mixer.



Do not stop the Antex driver before removing it. If you do, you will have to log off and then log on and restart the Antex driver.

### To remove the Antex driver

1. In the Windows NT Control Panel, double-click the **Multimedia** icon.
2. In the Multimedia property editor, select the **Devices** tab.
3. Click the plus (+) sign next to **Audio Devices** to expand the folder.
4. Select **Audio for Antex Digital Audio Driver** and click **Remove**.



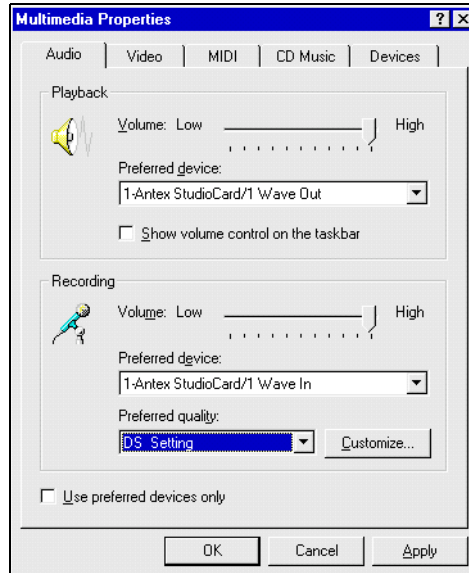
5. In the Windows Explorer, open the C:\Winnt\system32\Drivers folder and delete the **AntexWAV.sys** file.
6. Delete the C:\Antex folder.

### To install the Antex driver

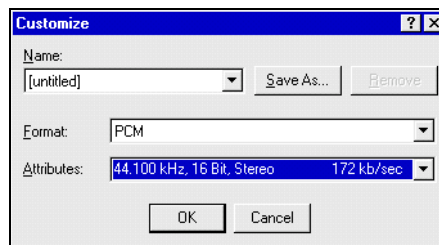
1. Insert the disk containing the Antex driver into your computer's disk drive.
2. Locate the folder containing the Antex files and double-click the **Setup.exe** file.
3. In the **Welcome to the Antex Driver Setup** dialog box, click **Continue**.
4. Accept the default path **C:\Antex**.  
The Antex Driver is installed and started.

### To set the multimedia properties

1. In the Windows NT Control Panel, double-click the **Multimedia** icon.
2. Select the **Audio** tab and set the properties as follows:



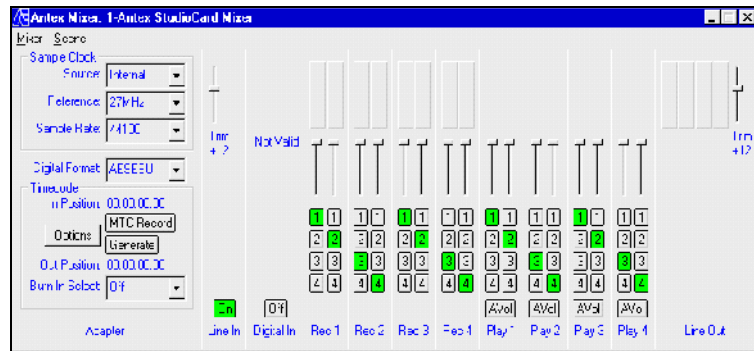
3. In the **Audio** page, click the **Customize** button in the **Recording** box.



4. In the Customize dialog box, select **PCM** in the **Format** list box.
5. In the **Attributes** list box, select **44.100 kHz, 16-Bit, Stereo 172 Kb/sec.**
6. In the **Name** list box, click **Save As** and enter **DS Settings**.  
The audio settings are saved in the DS Settings folder.

#### To set the Antex mixer

1. On the Windows NT desktop, click **Start > Programs > Antex Mixer**.  
The Antex Mixer dialog box is displayed.
2. Choose **Mixer > Lines** and select both **Adapter**, and **Digital Out** from the list.  
Selecting **Digital Out** enables MIDI output. Selecting **Adapter** ensures that the **Sample Clock** is displayed when you close the Lines dialog box.



*Antex Mixer*

3. In the Antex Mixer dialog box, click the **Line In** button to set the Sample Clock for the Analog input.
4. In the **Sample Clock** box select the following analog settings:
  - Set **Source** to **Internal**
  - Set **Reference** to **27MHz**
  - Set the **Sample Rate** to **44100**
5. Click the **Digital In** button to set the Sample Clock for Digital input.

#### Note

If a Not Valid message is displayed over the Digital In box, it means that the Antex digital I/O cable is not receiving a valid digital signal and you should verify the audio connections.

6. In the **Sample Clock** box, select the following digital settings:
  - Set **Source** to **Digital**
  - Set **Reference** to **Auto**
  - Set the **Sample Rate** to **48000** (or **44100**)

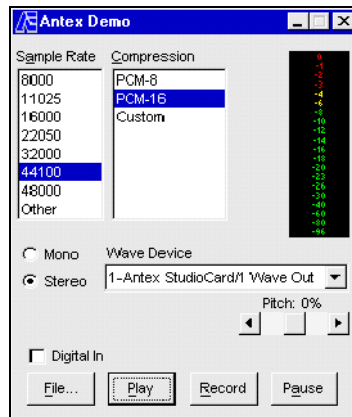
- From the **Scene** menu, choose **Save As** and save the Mixer file as DS Mixer.

### Testing the Antex Hardware

Once you have installed the audio driver, you should run the Antex demo to test the Antex hardware. You should also verify that the MIDI output is enabled.

#### *To run the Antex demo*

- From the Windows NT desktop, choose **Start > Programs > Antex Demo Programs**.
- Select **Antex Demo** from the list.



- In the Antex Demo dialog box, click **File**.
- In the WinNT\Media folder, select **Windows NT logon sound**.
- In the Antex Demo dialog box, click **Play**.  
The logon sound is played. If this test fails, verify your hardware connections and then repeat the driver installation. If the problem persists, contact your system reseller.

#### *To verify that MIDI output is enabled*

- In the Windows NT Control Panel, double-click the **Multimedia** icon.
- In the Multimedia Properties dialog box, select the **MIDI** panel.
- Verify that Antex is displayed in the MIDI output list.

## **Installing the SDI Driver**

The Intergraph StudioZ SDI driver controls the Intergraph StudioZ card that lets you capture, edit, and play back real-time video and animation on your Intergraph workstation.

### *To install the Intergraph StudioZ driver*

1. Insert the disk containing the Intergraph StudioZ driver into your computer's disk drive.
2. Locate the folder containing the Intergraph StudioZ files and double-click the **Setup.exe** file.

The Welcome dialog box is displayed.

3. Click **Next**.

The dialog box displays the Destination folder C:\Program Files\Intergraph\StudioZ Driver.

4. Click **Next** to accept the default destination folder.
5. You are prompted to read the Read Me file. You can read this file now or come back to it at a later date.

The Intergraph StudioZ driver setup is complete.

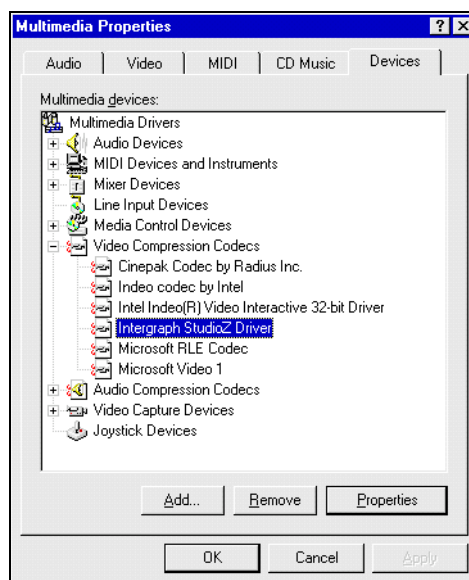
### *To start the Intergraph StudioZ driver*

1. In the Windows NT control panel, double-click the **Devices** icon.
2. Select **Intergraph StudioZ** from the list.
3. Make sure that **Startup** is set to **System**.  
If it is not, press the Startup button and select System as the Startup type.
4. Press the **Start** button.

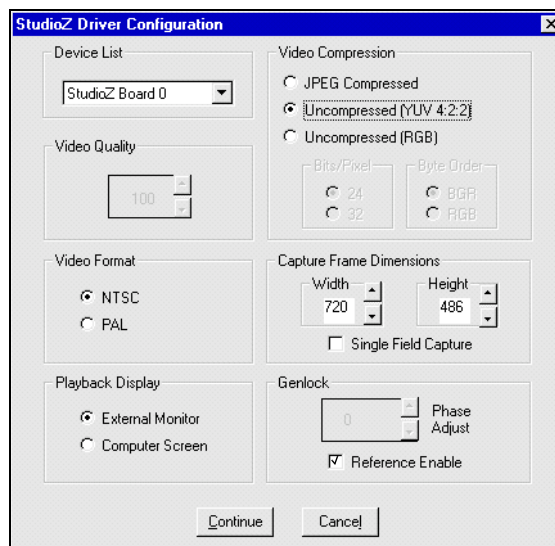
The Intergraph StudioZ driver is started.

### *To configure the Intergraph StudioZ driver*

1. In the Windows NT control panel, double-click the **Multimedia** icon.
2. In the **Devices** page, locate the **Video Compression Codex** folder. If required, click on the plus sign next to the folder to expand it.
3. In the Video Compression Codex folder, select the **Intergraph StudioZ Driver**.
4. Click the **Properties** button.



- In the Properties dialog box, click the **Settings** button. The configuration dialog is displayed.



- In the **Genlock** group box, select **Reference Enable** option. Your House Sync is used for synchronization. SOFTIMAGE|DS overrides all the other settings in this dialog box. The configuration is effective after you start the Intergraph StudioZ driver.

## Installing the Video in a Window Driver

The Video in a Window card controls real-time video in a computer monitor. In your system, this card is the Integral Technologies Flashkey card.

### *To install the Integral Flashkey card driver*

1. Insert the disk containing the Integral Flashkey driver in your computer's disk drive.
2. Locate the folder that contains the Integral Flashkey files and double-click the **Setup.exe** file.  
The setup is completed and you are asked if you want to restart the system.
3. Do not restart the system when prompted.
4. In the folder that contains the Integral Flashkey files, double-click the **Install\_ini.bat** file.  
The Flashkey driver is installed.
5. Restart the computer.

## Installing the Mouse Driver

To take advantage of all the functions on your Microsoft IntelliMouse, you must install the IntelliMouse driver.

### *To install the IntelliMouse driver*

1. Insert the disk containing the IntelliMouse driver into your computer's disk drive.
2. Open the folder that contains the IntelliMouse driver.
3. Double-click the **Setup.exe** file.  
All required files are copied.
4. In the Microsoft IntelliPoint 2 Setup dialog box, click **Next**.
5. In the next dialog box that is displayed, enter your name and company in the appropriate text boxes and click **Next**.
6. The next dialog box displays your name and company information, as well as the product identification number. You should write down this number for future reference, and then click **Next**.
7. When prompted to choose a location for the driver, click **Next** to accept the default folder.
8. Click **Finish** to complete the installation.
9. Click **Close** to exit the setup program.



10. When the installation is complete, do one of the following:

- If you want to install the WACOM driver next, press the **Return to Windows** button.

After you install the WACOM driver, restart Windows NT and the Microsoft IntelliPoint setup will be completed.

- If you do not want to install other drivers, click **Restart Windows** to complete the installation of the mouse driver.

## **Installing the WACOM Driver**

The WACOM driver controls the WACOM pen and tablet. After you install the WACOM driver, you can use the default configuration settings, or you can customize the pen and tablet according to the way you like to work.

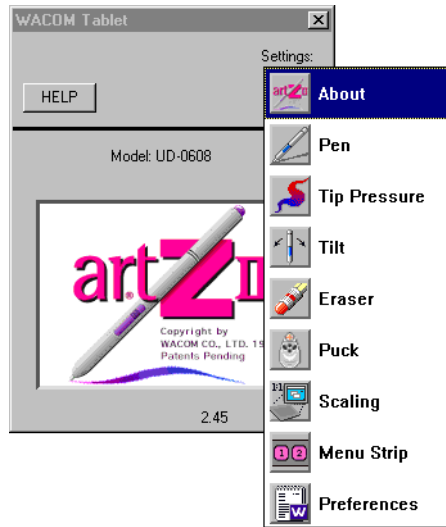
For example, if you are working with a pressure-sensitive brush in SOFTIMAGE|DS, you may want to adjust the pen tip sensitivity to fine tune the feel of the pen tip. Or, if you are using SOFTIMAGE|DS paint tools to trace the shape of an object on the tablet, you must configure the tablet so that the resulting graphic object is proportionally correct.

### *To install the WACOM driver*

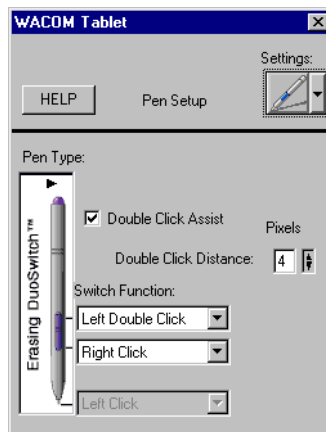
1. Insert the disk containing the WACOM driver into your computer's disk drive.
2. Locate the folder containing the WACOM files and double-click the **Setup.exe** file.
3. Accept all the defaults.
4. When the setup is complete, shut down and restart your computer.
5. To test the WACOM driver, drag the pen on the tablet.  
On the monitor, the pointer should follow the pen movement.

*To configure the WACOM driver*

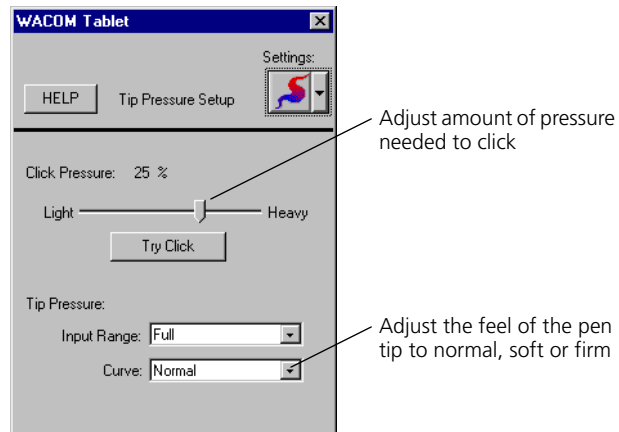
1. In the Windows NT control panel, double-click the **WACOM Tablet** icon.  
The WACOM tablet driver is displayed.
2. Click the **Settings** button.  
The Settings menu is displayed. It contains a list of icons that let you change the pen and tablet settings.



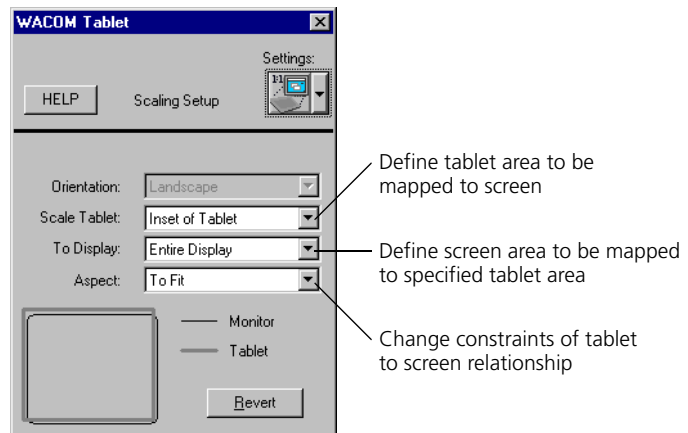
3. If you want to adjust the pen switch functions, click the **Pen** icon, and adjust the settings in the Pen setup box.



4. If you want to adjust the pen pressure sensitivity click the **Tip Pressure** icon and adjust the settings in the Tip Pressure setup box.



5. If you want to specify the screen-tablet relationship click the **Scaling** icon, and adjust the settings in the Scaling setup box.



For more information on customizing your WACOM graphic tools, refer to the WACOM documentation.

## Installing the License File

For SOFTIMAGE|DS to start, your system needs a software protection key (dongle) and a license file. The information on the software protection key is compared with information in the license file; if they match, SOFTIMAGE|DS can start.

### The Software Protection Key

Before you can install the license server, the software protection key must be attached to your computer, the corresponding port must be active, and the software protection key driver must be installed.

- To attach the software protection key, attach the software protection key to the base unit's parallel port (LPT1). Refer to the illustration on page 14.

#### *To make sure the port is active*

1. In the Windows NT Control Panel, double-click the **Devices** icon.
2. In the Devices dialog box, locate **Parallel** from the list.
3. Verify that the **Status** is **Started**. If it is not started, click **Startup**.
4. Select the **Automatic** check box
5. Shut down and restart the computer.

#### *To install the software protection key driver*

1. Insert the SOFTIMAGE|DS CD into the CD-ROM drive.
2. From the SOFTIMAGE|DS CD-ROM, open the **FLEXIm\1-RAINBW\WinNT** folder.
3. In the **Win\_nt** folder, double-click the **SetupX86.exe** file.  
The Sentinel Driver Setup Program dialog box is displayed.
4. From the **Functions** menu, choose **Install Sentinel Driver**.  
The driver is installed.

#### *To start the software protection key driver*

1. In the Windows NT control panel, double-click the **Devices** icon.
2. In the Devices dialog box, select **Sentinel** from the list and click the **Start** button.  
The Sentinel driver is started.

### The License File

The license file on your computer's hard drive is compared to information stored in the software protection key. If required, you should obtain the license file from your system reseller and copy it to your computer's hard drive.

*To copy the license file to your computer's hard drive*

1. Insert the floppy disk containing the license file in the disk drive.
2. Make a backup copy of the license file and place it in the C:\Temp folder.
3. In the floppy disk, right-click the license file and choose **Open With**.
4. Select **NOTEPAD** from the list, select the **Always use this program to open this file** check box and click **OK**.

The license file looks similar to this:

```
PACKAGE DIGITAL_STUDIO_PKG SOFTIMAGE 1.000 00B000319D42407859B9 \
COMPONENTS=DIGITAL_STUDIO
INCREMENT DIGITAL_STUDIO_PKG SOFTIMAGE 1.000 11-Jan-1998 0 9C83C3A48FD580E364CE \
HOSTID=SENTINEL_KEY=B2850E81 NOTICE=53608IRL001004339664 ck=20
```

Software Protection Key  
Identification Number



If you make any changes to the license file, SOFTIMAGE|DS may not start.

5. Make sure the software protection key Identification Number is the same in the license file and on the software protection key label.

```
SRB01478
9623L33019
FLEXID=7-B2850E81
```

Software Protection Key  
identification number

*Software protection key label*

6. Save this file as **LICENSE.DAT** in the C:\flexlm directory.

*Note*

LICENSE.DAT.TXT is not a valid name and will prevent SOFTIMAGE|DS from starting.

7. Make a backup of the license.dat file on a floppy disk and keep it in a safe place.

## Installing SOFTIMAGE|DS

The SOFTIMAGE|DS setup program lets you add or remove selected components, reinstall the software to replace any files that may have been corrupted, or remove all of SOFTIMAGE|DS.

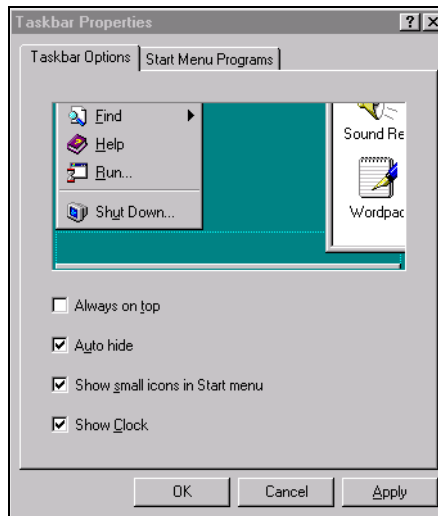
### Preparing the Windows NT Desktop for SOFTIMAGE|DS

To take full advantage of the SOFTIMAGE|DS layouts, you should make sure that the Windows NT task bar is set to auto-hide mode.

#### *To set up the Windows NT task bar*

1. From your Windows NT desktop choose **Start > Settings > Taskbar**.

The Taskbar Properties dialog box is displayed.



2. From the Taskbar Options page, set the following options:
  - Deselect the **Always on top** option.
  - Select **Auto hide**.
  - Select **Show small icons in Start menu**.
  - Select **Show Clock**.

## Removing SOFTIMAGE|DS

Make sure that you remove any previous versions before you reinstall SOFTIMAGE|DS.

### To remove SOFTIMAGE|DS

1. From your Windows NT desktop choose **Start > Programs > SOFTIMAGE|DS > Setup**.
2. From the SOFTIMAGE|DS setup dialog box, click **Remove All**. SOFTIMAGE|DS is uninstalled.

**Note**

To remove SOFTIMAGE|DS, you can also use the Add/Remove tool in the Windows NT Control Panel.

## Installing SOFTIMAGE|DS

The setup program installs all the software components required to run SOFTIMAGE|DS. Depending on which installation type you choose, optional components are also installed.

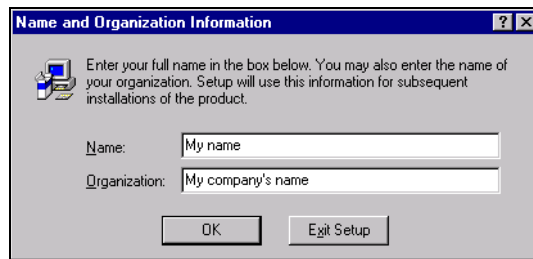
You can choose from three different types of installation: Complete, Compact, and Custom. The following table lists the optional components that can be installed with SOFTIMAGE|DS:

Component	Description	Included in Complete Installation	Included in Compact Installation
Online Help	Contains reference information on property editors parameters, interface elements, and tasks.	Yes	Yes
Guided Tour	Provides a multimedia overview of the SOFTIMAGE DS working environment.	Yes	No
DS Fonts Pack	Includes fonts that can enhance your titling in SOFTIMAGE DS.	Yes	No
DS Paper Grains	Includes paper grains that you can use to enhance your graphics in SOFTIMAGE DS	Yes	No
DS Colour Schemes	The colour scheme lets you give your entire desktop the SOFTIMAGE DS look. Once you add the DS Colour Scheme, you can choose it from the Windows NT > Settings > Taskbar menu.	No	No
DS Cursor Schemes	The cursor schemes let you select a new pointer scheme from the Windows NT control panel > mouse properties.	No	No

The Custom installation lets you individually select which optional software components are installed.

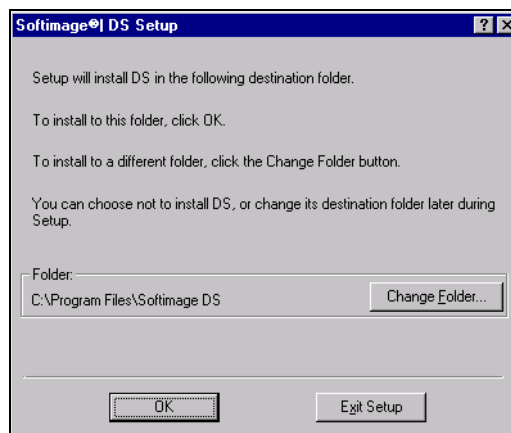
*To install SOFTIMAGE|DS*

1. Insert the SOFTIMAGE|DS CD in the CD-ROM drive.
2. Open the DSSetup folder.
3. Double-click the Setup.exe file.
4. Read the Welcome dialog box and click **Continue**.
5. Complete the items in the **Name and Organization Information** dialog box.



You are asked to verify the information and confirm.

6. Your product identification number is displayed. Read the SOFTIMAGE|DS dialog box and click **OK**.
7. Select the folder in which SOFTIMAGE|DS is stored.  
You should accept the default folder.

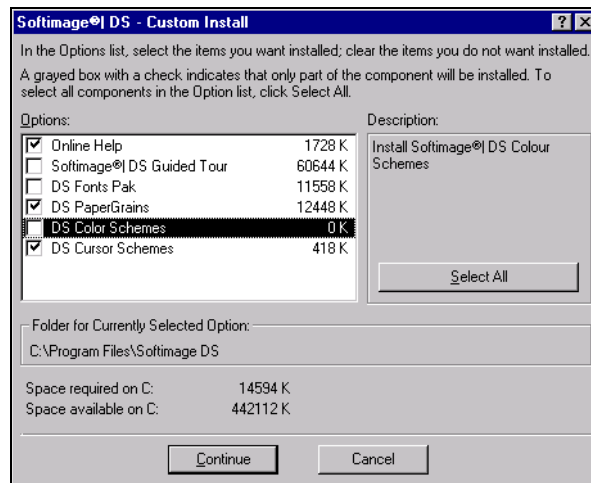


8. Specify which optional software components are installed by selecting one of the following installation types:





- Click **Complete Install** to install all the required components as well as the online help, the Guided Tour, the Fonts Pak and the Paper Grains. SOFTIMAGE|DS is installed with the complete set of optional components.
- Click **Compact Install** to install all the required components as well as only the online help. SOFTIMAGE|DS is installed with online help.
- Click **Custom Install** and select the options that you want to install in addition to the required components.



SOFTIMAGE|DS is installed with the selected optional components.

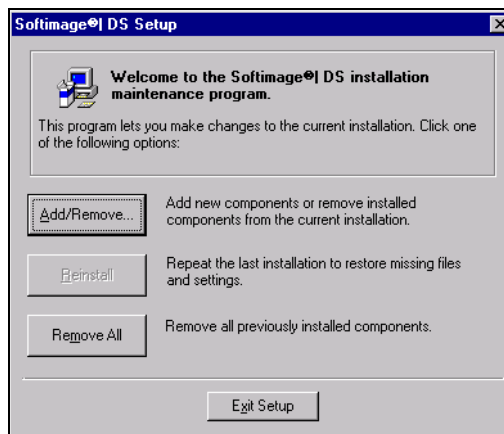
## Adding or Removing Software Components

Once you have installed SOFTIMAGE|DS, you can still customize your system to meet your changing needs. For a list of components that can be added or removed, see *Installing SOFTIMAGE|DS* on page 39.

### *To add or remove selected components*

1. Insert the SOFTIMAGE|DS CD-ROM in the disk drive.
2. From your Windows NT desktop, choose **Start > Programs > SOFTIMAGE|DS > Setup**.

The SOFTIMAGE|DS Setup dialog box is displayed.



3. Click **Add/Remove**.
4. Select the files that you want to add or remove.
5. Click **Continue**.

The selected files are added or removed and a message box is displayed to indicate that the setup is complete.

## Reinstalling SOFTIMAGE|DS

When reinstalling SOFTIMAGE|DS, the setup program searches your system disk and replaces any components that may be corrupted or missing.

### *To reinstall SOFTIMAGE|DS*

1. Insert the SOFTIMAGE|DS CD-ROM in the disk drive.
2. From your Windows NT desktop, choose **Start > Programs > SOFTIMAGE|DS > Setup**.

3. From the SOFTIMAGE|DS Setup dialog box, click **Reinstall**.

The software searches your system for missing or corrupted files and installs them as required.

## Installation Troubleshooting

For SOFTIMAGE|DS to start, your system needs a software protection key (dongle) and a license file. The software protection key identification number is compared to information in the license file. If they match, SOFTIMAGE|DS can start. If the licensing components are not properly set up, SOFTIMAGE|DS does not start and an error message is displayed. If this occurs, you should perform the following troubleshooting steps:

- Make sure that the license number matches the software protection key.
- Make sure that the license file extension is .dat.
- Verify that the software protection key is properly installed.

If startup problems persist, contact your system reseller.

### *To verify that the license number matches the software protection key*

1. In an MS-DOS window, type the following:  
C:\FLEXLM\LMUTIL LMHOSTID -FLEXID and press ENTER.  
Your license number is displayed.
2. Compare your license number with the software protection key identification number (located on the label of the software protection key attached to the parallel port).

### *To verify the file extension of the license file*

1. On the desktop, click the **My Computer** icon.
2. From the **View** menu, choose **Options**.
3. Select the **View** tab and select the **Show All Files** option.
4. Deselect the **Hide File Extensions for Known File Types** option and click **OK**.  
When you view files, the file name and extension are displayed.
5. In Windows Explorer, open the C:\flexlm folder.
6. In the C:\flexlm folder, verify that the file extension of the license file is **.dat**.
7. If the extension is .txt.dat or anything other than .dat, correct it as follows:
  - In the C:\flexlm folder, right-click the license file and choose **Rename** from the menu.
  - Enter the name **License.dat**  
Your license file has the proper file extension.

*To verify that the software protection key is properly installed*

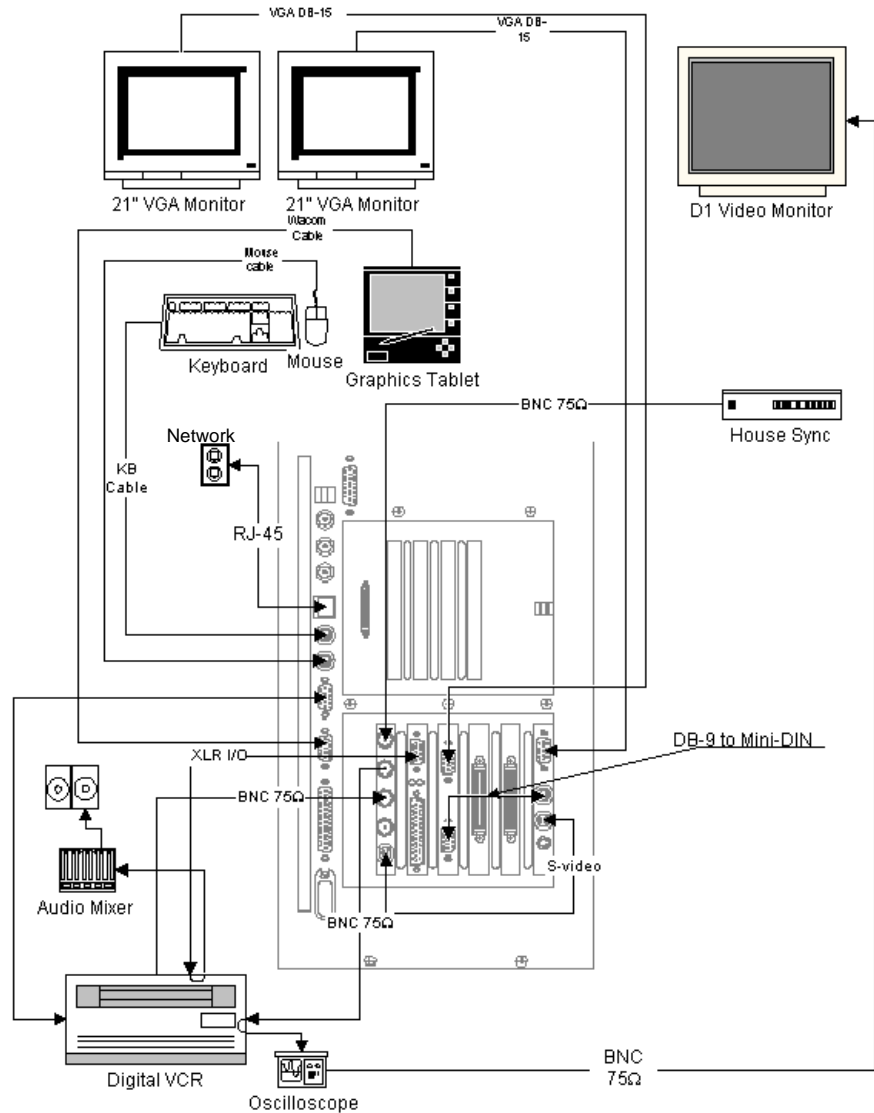
1. Make sure that the software protection key is attached to the base unit's parallel port (LPT1) and secured with the locking screws. Refer to *Attaching the Software Protection Key* on page 14.
2. Make sure the port is active as follows:
  - In the Windows NT Control Panel, double-click the **Devices** icon.
  - In the Devices dialog box, locate **Parallel** from the list.
  - Verify that the **Status** is **Started**.
3. If it is not started, click **Startup**.
4. Select the **Automatic** option and click **OK**.
5. Shut down and restart the computer.

## appendix **A**

# **Cabling Diagrams**

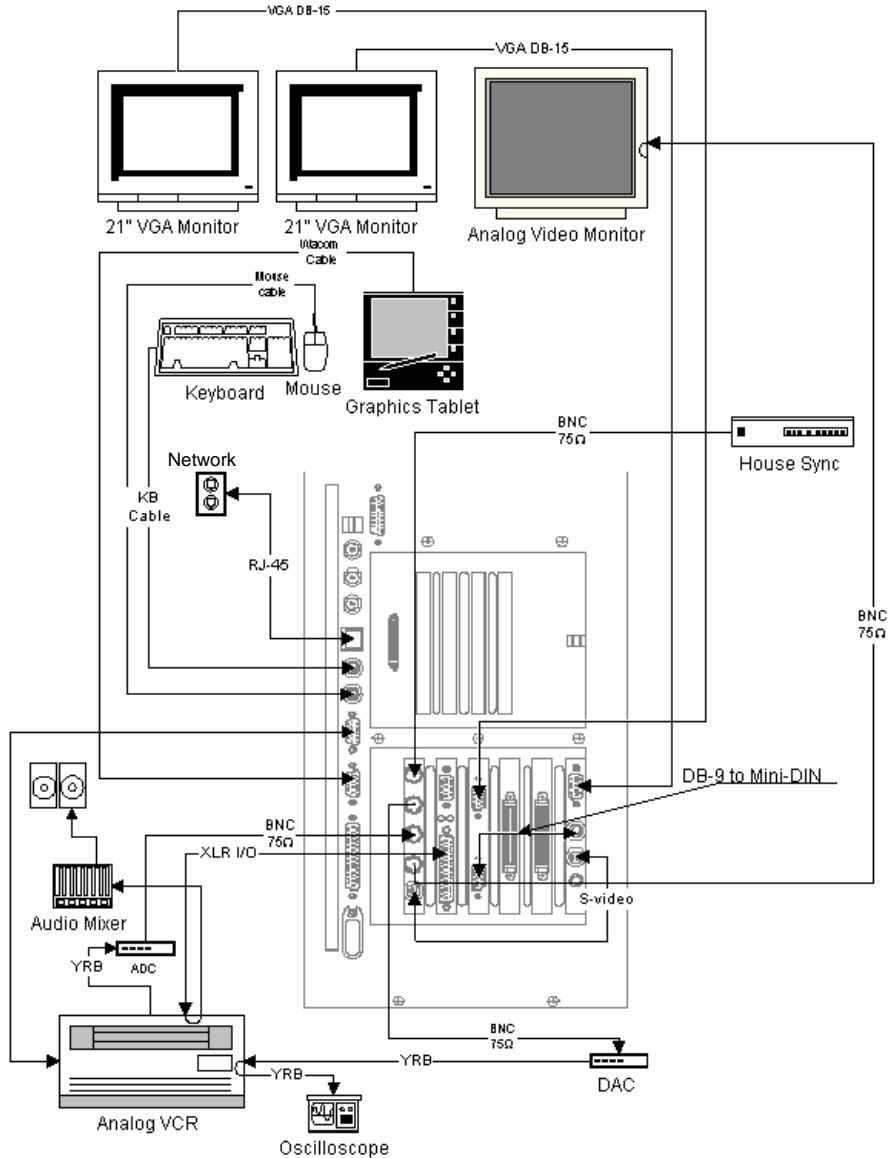


## Cabling for Digital Peripheral Devices



*Standard cabling for digital peripheral devices*

## Cabling for Analog Peripheral Devices



*Standard cabling for analog peripheral devices*



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